

practically unanimously, come to the conclusion that Molge, and not Triton, is, for example, the proper title of the newts, and morphologists refuse to accept the change, we can only say so much the worse for the morphologists.

As we have already said, great credit is due to Prof. Kingsley for the attention he has devoted to the systematic part of his subject, as his own special studies are mainly directed to the anatomical and embryological aspects. But in these days it is well nigh impossible for a man to gain sufficient knowledge of a section of a subject with which he is not thoroughly familiar as to avoid mistakes when writing on it. And it would have been better for the reader had the author invoked the aid of a few specialists to revise the proofs of the systematic section of the work. Many awkward "misprints" and other errors would thereby have been avoided.

Restricting our criticism in this respect to the chapter on mammals, we may call attention to quite a number of "misprints" between pp. 395 and 399, most of which will be self-apparent to those conversant with the subject. One of the most serious is *Choeropus* for *Choeropsis* (p. 398); the one name indicating a marsupial and the other a hippopotamus!

But there are more serious errors still. On p. 399 we are told, for instance, that among the fossil genera of antelopes are *Cosoryx*, *Tragelaphus* and *Antidorcas*; the second being the title of the existing bushbucks, or harnessed antelopes, and the third that of the springbuck, which is alluded to on the same page as *Gazella euchore*, *Cosoryx* being also mentioned higher up on the same page as a deer! Neither is it correct to say that the American deer form only a sub-genus of *Cervus*. Again (p. 400), the domesticated Indian cattle are not the typical representatives of *Bibos*, and, indeed, do not belong to that group at all; while the statement (p. 401) that mastodons occur in Africa is, so far as we are aware, not founded upon fact. Were we disposed to dwell upon them, many other errors of a kindred nature might be pointed out, but we pass on to the illustrations.

Such of the latter as relate to anatomical structures and the development of the embryo are far the most satisfactory, and serve their purpose well, although frequently not of a very high class from an artistic point of view. But when we turn to the figures of birds and mammals we are surprised that any publisher could have been found willing to print such ghastly productions. Perhaps the very worst amongst a hopelessly bad lot are those of a bird of paradise on p. 350, and of the Sumatran rhinoceros on p. 355. Smudgy daubs is a mild way of describing them; and in the present age of cheap photographic illustration, the appearance of such ill-executed caricatures in any book is nothing short of a disgrace to all concerned in its production.

As regards the palaeontological aspects of the subject, we think the author is to be congratulated on the manner in which it is treated. Of course there will be errors—and the omission of any mention of *Ophthalmosaurus* when noticing the *Ichthyosauria* (p. 313) is one—but they are few and far between; and in the main the relations of the extinct to the living types are well explained.

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Apparently the book has been previously published in America, and its reproduction in this country may be taken as an indication that it has met with a favourable reception in the land of its birth. In spite of the blemishes to which we have referred (and they are, after all, not very great), we have no hesitation in saying that Prof. Kingsley's little volume is worthy of a hearty welcome on this side of the Atlantic on the part of both teachers and pupils.

R. L.

POPULAR BIBLICAL STUDIES.

The Social Life of the Hebrews. By the Rev. Edward Day. The Semitic Series. Pp. 255. (London: John C. Nimmo, 1901.)

THE present volume is the second of a series published under the editorship of Prof. Craig, of the University of Michigan, with the object of presenting "in popularly scientific form" the results of recent researches in Semitic fields. Prof. Craig has laid down for the last two years an ambitious programme of the work to be done in his series, and has announced the titles of no less than thirteen books of the series, but up to the present time only two of them have appeared. The first, by Prof. Sayce, was devoted to the social life of the Babylonians and Assyrians, and was reviewed by us last year; the second, which has appeared this year, and with which we are concerned, deals with the manners and customs of the ancient Hebrews. Mr. Day has undertaken a subject of great interest and, at the same time, one of great difficulty, inasmuch as almost the only sources accessible are limited to the Books of the Old Testament.

The publication of the late Prof. Robertson Smith's "Kinship and Marriage" and "Religion of the Semites" marked a great advance in Semitic learning, and since that time all writers on the customs of the Hebrews have been in great measure indebted to these books. In the first part of his book Mr. Day summarises to a certain extent the main features of Prof. Robertson Smith's work, though with some serious omissions. The Clan, the Family and Sacrifice are dealt with in three short chapters, none too much space for such important subjects, though doubtless enough for a popular work, while the remainder of the first part treats of the Hebrews during the period of the Judges. But no explanation at all has been given of the significance of circumcision, either as a sacrificial rite or from its connection with the *hōthēn* "wife's father"; and though this may be due to the fact that the book is a popular work, yet, on the same grounds, a good deal of the matter relating to the licentious temple worship and similar customs might have been omitted. More, too, might have been said with advantage on the subject of totemism, which is but briefly discussed. The difficult subject of the Hebrew idea of the immortality of the soul has, perhaps, been reserved for another volume of the series, but we should have been glad to see a little more space devoted to the popular beliefs concerning Sheol, which is only spoken of once. Some reference, also, might have been made to the stress laid by the Hebrews on the importance of posterity and of prolonging the family name, which thereby acquired a terrestrial immortality. The chapter on the conception of Yahweh towards the

end of the book is better thought out, and will suffice for the needs of a popular work.

A characteristic of the book to which we must take serious exception is the frequent omission of references to passages on which Mr. Day bases his deductions. It is not enough to say "suicide was not discountenanced" (p. 172); if the statement is to be fully accredited, all the arguments, with chapter and verse, should be given in full. Moreover, we cannot congratulate Mr. Day on his attempt to provide us with a translation superior to that of the Authorised Version of the words '*āsereth d'bhārīm*, or of I. Sam. ii. 8; the former he renders by "the Ten Words," a most infelicitous choice of the meanings of *dābhār* open to him, while the latter is translated "He taketh the needy from the city-dump" (p. 144); surely the old English word "dunghill" is not too outspoken for a popular book? Again, we must protest against such barbarisms as "pled" for "pleaded" (p. 28); "demonic" for "demoniac" (p. 56); "a few nearby men" (p. 62); and "he was the power back of nature" (p. 88); or such a hybrid as "David ben Jesse" (p. 63). We could wish, too, that Mr. Day's thirst after "local colour" (p. 225) had not led him to describe Samson as "being peculiarly susceptible to female charms" (p. 53); or his labours as "deeds of a purely personal character, in which a man of great strength got a little needed exercise, and at the same time revenged himself upon his personal enemies" (p. 66); or to refer to the rich of Samaria as "wealthy nabobs" (p. 102). The use of modern colloquialisms is unpardonable in all descriptions of Biblical events, challenging, as they do, the classic English of the Authorised Version. What can be said in defence of the following: "It is probable that the star-gazing of the society belles of Jerusalem, a Babylonian importation, was, like similar attempts to acclimate (!) foreign cults, in the nature of a fad, as was chariotteering in the capital in the days of Absalom and Adonijah" (p. 116), or, "It was a long way . . . from the city-dump to a seat among the nobles of the land; but Yahweh knew the way" (p. 151)? Moreover, we are not by any means convinced that the "modern picnic" (p. 45) is the survival of the ancient sacrificial feast, even with the limitation "though seldom of such an exclusive character." It is a great pity that Mr. Day has thought fit to include such colloquialisms as the above in a work on which he has evidently spent time and care. We think, however, that he has not made the most of his opportunities.

OUR BOOK SHELF.

The Table of British Strata. By Dr. H. Woodward and Mr. H. B. Woodward. (London: Dulau and Co., 1901.)

THIS table will be welcome to students and teachers, for the existing charts are now quite out of date. To compile such a laborious and somewhat thankless task, for it is impossible to please every one; indeed, the authors admit that in two respects, retaining the Permian in the Palaeozoic and placing the Wealden in the Jurassic, they "seek to assert general rather than individual opinion." As to the former, the question seems to be largely one of locality; but in the latter we should have preferred the conservative side, at any rate till better cause is shown for the change; especially since it has led to the virtual suppression of the Neocomian as a system. For the same reason we are glad to see the Tremadoc group

left in the Cambrian system. The latter they allow to be an important geological system, though we should have liked to see the alternative title, "Primordial Silurian," entirely suppressed, for it is commemorative of nothing less than an unwarrantable usurpation. The authors include the Solva Beds of St. Davids with the Menevian, which no doubt is justified by the presence of Paradoxides; but in that case too small a thickness is assigned to the system, for this addition would make it at St. Davids over two thousand feet. Remembering its importance on the Continent, we should have ventured to exalt Rhætic, thin as it may be in Britain, to the dignity of a system, and we think that over much importance is conceded to the subdivisions of the Tertiary series. Are the Thanet Sands or the Oldhaven Beds—not to mention others—more important than the Lower Calcareous Grit or the Stonesfield Slate? Yet we find the former among Formations and the latter in Subdivisions. Does not the statement that the glacial deposits contain only derived fossils beg a disputed question? It would be well to add "slates" to the economic products of Charnwood, for the "honestone," which is mentioned, is very local. A notable feature is the recognition as formation of Torridonian, Uriconian, Dalradian and Lewisian in the Archaean rocks, though some objection may be taken to the third name, on the ground that as originally defined it was a much too heterogeneous assemblage, and we may doubt whether the Moine schists, having regard to their history, form a good type. These criticisms, however, affect only points of detail, and some may even regard them as excellences, while as to the general excellence of the table and its high value to students there cannot be the slightest question.

Differential and Integral Calculus for Beginners. By Edwin Edser, A.R.C.S. Pp. vi + 253. (London: Nelson and Sons, 1901.)

THIS is a book written to supply the wants of students in advanced physics who require some knowledge of the calculus to enable them to read treatises on physical science, but who have not time to devote to a thorough study of higher mathematics. It is the outcome of a series of articles printed some time ago in the pages of the *Practical Teacher*. Most of the text-books which have been written on the subject of the calculus treat it too fully, and deal with examples of too complex and difficult a character to be really suited to the needs of students, who chiefly want the calculus to enable them to understand the theory of comparatively simple experimental problems in mechanics and physics. The present little book is one of several that have been written in recent years with the object of supplying this want. The author has treated the subject in a very simple manner, and does not assume the reader to have more mathematical skill than is involved in a familiar knowledge of elementary algebra and geometry. The opening chapter deals with the elements of coordinate geometry, and explains the nature of the circular and exponential functions sufficiently to render it needless for the ordinary student to refer to other books. This is further ensured by the addition of an appendix dealing with trigonometrical ratios and formulæ. Two chapters are spent on the differentiation of simple and complex functions, two others on maxima and minima and expansions, and two more on simple integrations by direct and special methods. This is followed by a section devoted to applications to problems in geometry, mechanics and, more especially, in physics. The final chapters deal with double and triple integration and simple differential equations.

In general the book is well written, and suitable for beginners. A good feature is the introduction of several numerical problems. The subject in this way is more vividly brought to the student's mind than when the examples, as is ordinarily the case, begin and end in